

CLAIMS

What is claimed is:

1. A position determination system comprising:
a wireless computer network transceiver configured to communicate with a network wireless access point, the transceiver receiving data from the access point;
a position determining entity to determine the position of the mobile communication device based on the data received from the access point; and
a display to display data based on the determined position.
2. The system of claim 1 wherein the wireless computer network transceiver and the display are incorporated into a portable device and the position determining entity is located remote from the portable device.
3. The system of claim 1 wherein the wireless computer network transceiver is configured for operation in accordance with IEEE 802.11 wireless network standards.
4. The system of claim 1 wherein the displayed data based on the determined position is position information.
5. The system of claim 4 wherein the position information is an address.
6. The system of claim 1 wherein position data related to a position of the wireless access point is stored in a management information base as part of the wireless access point, the displayed data based on the determined position being the position data of the wireless access point.

7. The system of claim 6 wherein the position data is location data or an address of the wireless access point.
8. The system of claim 6 wherein the position data further comprises a predicted range of the wireless access point.
9. The system of claim 1 wherein position data related to a position of the wireless access point is determined by a remote position determining entity, the displayed data based on the determined position being position data of the wireless access point as determined by the remote position determining entity.
10. The system of claim 1 wherein the displayed data based on the determined position is non position information.
11. The system of claim 10 wherein the non position information is information related to a store located proximate the determined position of the mobile communication device.
12. The system of claim 1 wherein the transceiver communicates a request to the wireless access point for non position information based on the determined position of the mobile communication device.
13. The system of claim 12 wherein the non-position information is a merchant identification associated with the wireless access point.
14. The system of claim 1 wherein the transceiver communicates a request to the wireless access point for sales information or assistance in a store located proximate the

determined position of the mobile communication device.

15. The system of claim 1, further comprising a global positioning system (GPS) receiver to receive data from a plurality of GPS satellites, the position determining entity using the data received from the GPS satellites to determine the position of the mobile communication device.

16. The system of claim 15 wherein the position determining entity generates a weighted combination of the data received from the GPS satellites and data from the wireless access point to determine the position of the mobile communication device.

17. The system of claim 1, further comprising a wireless telephone receiver to receive communication signals from a base transceiver station, the position determining entity using the communication signals from the base transceiver station to determine the position of the mobile communication device.

18. The system of claim 17 wherein the position determining entity generates a weighted combination of the communication signals from the base transceiver station and data from the wireless access point to determine the position of the mobile communication device.

19. The system of claim 17 wherein the wireless telephone receiver is configured for code division multiple access (CDMA) operation and the communication signals from a base transceiver station are CDMA pilot signals.

20. A position determination system comprising:
a global positioning system (GPS) receiver to receive data from a plurality of

GPS satellites;

a wireless telephone receiver to receive communication signals from a base transceiver station;

a wireless computer network transceiver configured to communicate with a network wireless access point, the transceiver receiving data from the access point; and

a position determining entity to determine the position of the mobile communication device based on the data received from the GPS satellites, if available with an acceptable error range, the communication signals from the base transceiver station, if available with an acceptable error range, and the data received from the network wireless access point.

21. The system of claim 20 wherein the position determining entity generates a weighted combination of at least two position data sources comprising data received from the GPS satellites, the communication signals from the base transceiver station, and the data received from the network wireless access point.

22. The system of claim 21 wherein the weighted combination of at least two position data sources is based on predicted accuracy of the position data sources.

23. The system of claim 20 wherein the wireless computer network transceiver is configured for operation in accordance with IEEE 802.11 wireless network standards.

24. The system of claim 20 wherein the displayed data based on the determined position is position information.

25. The system of claim 20 wherein the displayed data based on the determined position is non position information.

26. The system of claim 20 wherein the transceiver communicates a request to the wireless access point for non position information based on the determined position of the mobile communication device.

27. The system of claim 20 wherein the wireless telephone receiver is configured for code division multiple access (CDMA) operation and the communication signals from a base transceiver station are CDMA pilot signals.

28. The system of claim 20 wherein the GPS receiver, the wireless telephone receiver and the wireless computer network transceiver are incorporated into a portable device and the position determining entity is remote from the portable device.

29. A portable position determination system comprising:
means for communicating with a computer network wireless access point and for receiving data from the access point;
means for determining the position of the portable position determination system based on the data received from the access point; and
means for displaying data based on the determined position.

30. The system of claim 29 wherein the means for communicating with a computer network wireless access point and the means for displaying data are incorporated into a portable device and the means for determining the position of the portable position determination system are located remote from the portable device.

31. The system of claim 29 wherein means for communicating with the computer network wireless access point is configured for operation in accordance with IEEE

802.11 wireless network standards.

32. The system of claim 29 wherein the displayed data based on the determined position is position information.

33. The system of claim 29 wherein the displayed data based on the determined position is non position information.

34. The system of claim 33 wherein the non position information is information related to a store located proximate the determined position of the mobile device.

35. The system of claim 29 wherein the means for communicating with a computer network wireless access point communicates a request to the wireless access point for non position information based on the determined position of the mobile device.

36. The system of claim 29, further comprising means for receiving data from a plurality of global positioning system (GPS) satellites, the means for determining the position of the mobile device using the data received from the GPS satellites to determine the position of the mobile communication device.

37. The system of claim 36 wherein the means for determining the position of the portable position determination system generates a weighted combination of the data received from the GPS satellites and the data received from the access point to determine the position of the mobile device.

38. The system of claim 29, further comprising means for receiving communication signals from a wireless telephone system base transceiver station, the means for

determining the position of the mobile device using the communication signals from the base transceiver station to determine the position of the mobile device.

39. The system of claim 38 wherein the means for determining the position of the portable position determination system generates a weighted combination of the communication signals from the base transceiver station and the data received from the access point to determine the position of the mobile device.

40. A method for position determination in a mobile device comprising:
receiving data from a computer network wireless access point;
determining the position of the mobile communication device based on the data received from the access point; and
displaying data based on the determined position.

41. The method of claim 40 wherein communicating with the computer network wireless access point is in accordance with IEEE 802.11 wireless network standards.

42. The method of claim 40 wherein the displayed data based on the determined position is position information.

43. The method of claim 40 wherein the displayed data based on the determined position is non position information.

44. The method of claim 43 wherein the non position information is information related to a store located proximate the determined position of the mobile device.

45. The method of claim 40, further comprising transmitting, from the mobile

communication device to the computer network wireless access point, a request for non position information based on the determined position of the mobile device.

46. The method of claim 40, further comprising receiving data from a plurality of global positioning system (GPS) satellites wherein determining the position of the mobile device uses the data received from the GPS satellites to determine the position of the mobile device.

47. The method of claim 46, further comprising generating a weighted combination of the data received from the GPS satellites and the data received from the access point to determine the position of the mobile device.

48. The method of claim 40, further comprising receiving communication signals from a wireless telephone system base transceiver station wherein determining the position of the mobile communication device uses the communication signals from the base transceiver station to determine the position of the mobile communication device.

49. The method of claim 48, further comprising generating a weighted combination of the communication signals from the base transceiver station and the data received from the access point to determine the position of the mobile device.